

A NEARCTIC SPECIES OF IPHITRACHELUS, WITH A KEY  
TO THE KNOWN SPECIES

(HYMENOPTERA: PLATYGASTERIDAE)

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*Iphitrachelus* Walker is a distinctive genus, previously known only from Europe where it has a wide distribution (Masner 1957, 1958). (*Iphitrachelus americanus* Ashmead 1891 has been shown by Muesebeck (1939) to be an *Allotropa* sp.) A single North American specimen in the USNM collection represents the first record of this genus outside the Palearctic region. Masner (1957) gave a revised generic diagnosis to which the following characters should be added: occiput with deep, median, conical depression close to the posterior margin; area between antennal sockets with deep, narrow groove; tooth-like projection, if present, formed from anterior margin of clypeus; anteroventral margin of pronotum very broad, without obvious surface markings, but with deep, cylindrical impression close to fore-coxa; mesoplurae with deep, 3-lobed impression; propodeal membrane extending ventrally and continuous with membrane arising from ventral margin of metaplurae; tergite of first gastral segment with or without a pair of scale-like membranes.

***Iphitrachelus foutsii*, n. sp.**

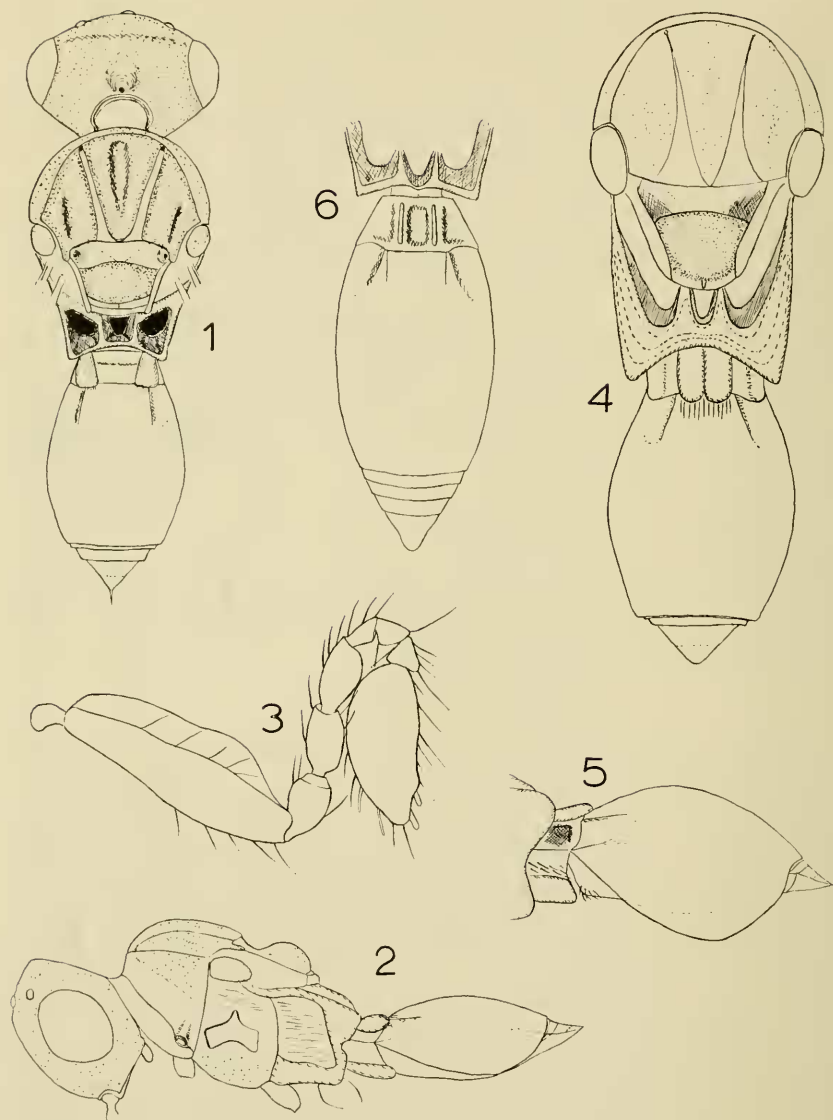
*Female*.—Length 0.7 mm. Color, dark brown, all appendages yellow, propodeal and gastral membranes semitranslucent.

Head transverse; coarsely reticulate except clypeus which is smooth and polished; vertex and occiput meeting at acute angle, but carina absent; lateral ocelli only slightly closer to eye margin than to median ocellus. Antennae 8 segmented; surface of scape reticulate; upper lamella absent; lower lamella narrowing gradually distally, maximum width nearly one-half of width of body of segment. Segments 2-4 subequal, 4 without distal neck-like projection; 5-7 small, triangular; 8 forming a broad, massive club, ratio of width to length 9:20. All segments, including scape, with long, erect hairs.

Thorax slightly narrower than head. Prothorax with triangular area next to tegula coarsely reticulate and on same plane as mesopleura; remaining lateral area polished, sloping. Mesonotum coarsely reticulate; parapsidal furrows complete, deeply impressed, wide, but not remarkably expanded posteriorly; causing the sclerite to appear 3-lobed; each lobe with a median, longitudinal impression. Scutellum depressed and polished anteriorly; elevated, rounded and reticulate posteriorly; posterior margin depressed and polished. Metanotum narrow, polished. Mesoplurae polished dorsally with fine longitudinal striae; median area

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Figs. 1-3. *Iphitrachelus foutsii*, new species, female. Fig. 1, dorsal view; Fig. 2, lateral view; Fig. 3, antenna. Figs. 4-5. *I. gracilis*, female. Fig. 4, thorax and abdomen, dorsal view; Fig. 5, gaster, lateral view. Fig. 6. *I. lar*, female gaster, dorsal view.

polished with large, deep 3-lobed depression; coarsely reticulate ventrally. Metapleurae sparsely covered with long white hairs; dorsal, ventral and posterior margins obscured by continuous membrane. Dorsal surface of propodeal membrane

forming a narrow border surrounding a median and two lateral, steep-sided depressions. Fore wings as long as entire body; truncate distally; marginal fringes very short; submarginal vein straight, one-fifth of length of wing. Hind wing as long as thorax and abdomen combined; distal surface sparsely covered with microtrichia; marginal hairs sparse and less than one-third of width of wing. All tarsi 4-segmented; spur of fore tibia comb-like, and opposing surface of basitarsus with similar comb-like row of hairs. Ratio of lengths of fore tarsal segments, 5:2:2:3.

Gaster less than twice as long as wide; shorter and narrower than thorax. Segment 1 transverse; tergite with pair of widely separated, scale-like membranes; sternite covered by single membrane. Tergite 2 polished, basal foveae sharply separated from median area; laterotergites wide, vertical, not adpressed to sternite and not forming carinated edge to gaster; in lateral view not extending past ventral surface of gaster. Sternite 2 with four sharply separated basal foveae; surface with fine longitudinal striae. Terminal segments narrow, carinated laterally, bare, polished, and forming a broad, pointed triangle.

*Male*.—unknown.

*Holotype*.—Female, unique. USNM No. 69099. Cabin John, Maryland; Summer, 1916; R. M. Fouts. Left antenna, wings, fore and middle legs mounted on slides with same data.

Although *I. foutsii* is easily distinguished from the Palearctic species *I. lar* Walk. and *I. gracilis* Masn. several of the characters used by Masner (*op. cit.*) to separate these latter species occur in curious combinations in *foutsii*; e.g. the lower scape lamella is very wide, the mesonotum deeply incised and the propodeal membrane semitranslucent with steep sided depressions as in *lar*, while the reduced upper scape lamella, the very wide terminal antennal segment and the form of the gaster (with membranous scales on tergite 1, and the laterotergites of segment 2 very wide, not adpressed to the sternite) are essentially like those of *gracilis*.

The following key will serve to separate the known females of the genus. In *gracilis* the arrangement of the membranes on tergite 1 is identical in male and female, and the use of this character in the key will probably also serve to separate the males of all three species.

KEY TO THE SPECIES OF *Iphitrachelus*

1. First gastral tergite without scale-like membranes (Fig. 6); laterotergites of segment 2 not especially wide, adpressed to sternite ..... *lar* Walk.  
 First gastral tergite with pair of scale like membranes; laterotergites of segment 2 wide, not adpressed to sternite ..... 2
2. Membranes on tergite 1 contiguous (Fig. 4); laterotergites of segment 2 hanging below level of sternite (Fig. 5) ..... *gracilis* Masn.  
 Membranes on tergite 1 widely separated, (Fig. 1); laterotergites of segment 2 at widest point level with ventral surface of sternite (Fig. 2) ..... *foutsii* n. sp.

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### TAPINOMA MELANOCEPHALUM ATTACKS LABORATORY FLEAS IN PUERTO RICO

(HYMENOPTERA: FORMICIDAE)

*Paratrechina longicornis* (Latreille) attacks fleas in Puerto Rico (Fox and Garcia-Moll, 1961, J. Econ. Ent., 54 (4): 1065). Herewith, we implicate another species, *Tapinoma melanocephalum* (Fabricius), known also to prey on flies (Pimentel, 1955, J. Econ. Ent., 48 (1): 29).

In March 1966, *T. melanocephalum* workers began to visit a laboratory colony of the sticktight flea, *Echidnophaga gallinacea* (Westw.), maintained on a hamster. We suspected that the ants were removing eggs and possibly attacking larvae when a sharp decrease in daily flea egg counts followed. Although ants did not attack flea eggs and larvae when placed together in vials, they did rapidly remove eggs and attack larvae which were placed across an ant column on a laboratory bench. Smaller larvae were seized and, still wiggling, removed almost immediately by a single ant. A larger larva was seized by one to five workers and held for approximately a minute, but only one worker carried the larva, now moribund, from the area. Similar results were obtained with the larvae of the oriental rat flea, *Xenopsylla cheopis* (Rothschild).

Before the ant invasion daily counts of sticktight flea eggs were over a hundred, but after three days of ant attacks counts dropped to five. Beechwood-creosote, applied outside the flea colony, repelled the ants. Thereafter, daily egg counts progressively increased to a high of 70 five days later.

D. R. Smith identified the ant. This work was supported by Graduate Research Training Grant 5 T1 AI 15 from the National Institutes of Health, U. S. Public Health Service.—J. R. TAMSITT AND IRVING FOX, *Dept. of Medical Zoology, School of Tropical Medicine, San Juan, Puerto Rico.*

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